REMARKS

The Office Action of August 2, 2007, contains three separate rejections of various of Claims 1-18. Claims 1-3, 6, 7 and 9-16 were rejected under 35 U.S.C. § 102(b) over the Shim et al. publication. Claims 1-18 were rejected under 35 U.S.C. § 103(a) under the Yamashita et al., Nakagawa et al. and Yamanaka U.S. patents. Claims 1-18 were also rejected on the grounds of obviousness-type double patenting. For the reasons hereinafter recited, applicants submit that these rejections (as applied to amended Claims 1-18) should be withdrawn.

Claims 1-3, 6, 7 and 9-18 were rejected under 35 U.S.C. 102(b) as being anticipated by the Shim et al., Journal of Polymer Science: Part A: Polymer Chemistry, Vol. 36, 2997-3012 (1998). Independent Claim 1 has now been amended. As such, none of these claims are anticipated.

Amended Claim 1 defines a thermoplastic elastomer composition comprising two distinct components. One component is an isobutylene block copolymer (A) that does not substantially have any alkenyl group in the terminus thereof. The other component is an alkenyl-terminated isobutylene polymer (B).

Shim et al. does not disclose any composition comprising both the isobutylene block copolymer (A) that does not substantially have any alkenyl group in the terminus thereof, and alkenyl-terminated isobutylene polymer (B). Because copolymer (A) of Claim 1 does not have terminal alkenyl group, the polymer (B) cannot meet the requirement of the copolymer (A) simultaneously and amended Claim 1 cannot be anticipated by Shim et al.

Claims 1-18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Yamashita et al.(US 6,140,418) in view of Nakagawa et al. (US 7,129,294), and further in view of Yamanaka (US 6,773,758). However, applicants submit that amended Claim 1 defines an invention which is neither disclosed nor suggested by these references (collectively) and, furthermore, produces an unexpected effect compared to the references.

Claim 1 is directed to a thermoplastic elastomer composition comprising two components. One is an isobutylene block compolymer (A) that does not substantially have any alkenyl group in the terminus thereof, wherein the copolymer (A) contains a polymer block composed predominantly of isobutylene and a polymer block composed predominantly of an

aromatic vinyl compound. The other component is an alkenyl-terminated isobutylene polymer (B).

As is demonstrated in Examples of the specification, the thermoplastic elastomer compositions of the present invention have a low permanent compression set (see Tables 1 to 3 in the instant specification). Such a low permanent compression set cannot be attained if the composition contains only either the isobutylene block copolymer (A) or the alkenyl-terminated isobutylene polymer (B). If a thermoplastic elastomer composition contains only the isobutylene block copolymer (A), namely SIBS1, the permanent compression set was as high as 66% (Comparative Example 1, Table 1). On the other hand, if a thermoplastic elastomer composition contains only the alkenyl-terminated isobutylene polymer (B), namely APIB1, the composition could not be molded to a sheet form (Comparative Example 3, Table 1). If both the isobutylene block copolymer (A) and the alkenyl-terminated isobutylene polymer (B) are used, however, the permanent compression set of the composition is lowered to as low as 42% (Example 1, Table 1). This permanent compression set lowering effect is the result of a synergy between the isobutylene block copolymer (A) and the alkenyl-terminated isobutylene polymer (B). Such synergy is not disclosed or suggested by any of Yamashita et al., Nakagawa et al. and Yamanaka, and applicants submit that it would be unexpected from their teachings. The same is equally true of the relation among Comparative Example 6, Comparative Example 8 and Example 9 (see Table 3) described in the present application. The permanent compression set as low as 41% in Example 9 cannot be expected from the results of Comparative Example 6 and Comparative Example 8.

It is respectfully submitted that the aforedescribed synergy resulting from the claimed invention cannot be obvious over Yamashita et al., Nakagawa et al. and Yamanaka. As such, amended Claims 1-18 would not be obvious to a person skilled in the art.

The third rejection presented by the Examiner is obviousness-type double patenting based on U.S. Patent No. 7.105,611. Attached hereto is a Terminal Disclaimer of the term of that patent. As such, the double patenting rejection is rendered moot.

Applicants submit that Claims 1-18 should now be in condition for allowance. Passage of the application is respectfully requested.

Respectfully submitted,

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Attachment - Terminal Disclaimer

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